

REMARKS

Claims 8-15 are pending in the instant application. No claims have been added by this Amendment. Claims 9-13 have been cancelled by this Amendment. Therefore upon entry of this present Amendment claims 8, 14 and 15 will be pending.

Specification

The Examiner has objected to the amended abstract under 35 U.S.C. §132(a) as introducing new material which is not supported by the original disclosure. Applicants have amended the Abstract, so the objection is moot. Applicants traverse this objection to preserve the issue for possible appeals.

Applicants would like to draw Examiner's attention to page 4 last paragraph of the original disclosure.

Preferred embodiment communications systems use preferred embodiment methods. In preferred embodiment communications systems customer premises transceivers (modems) and central office transceivers (modems) could each include one or more digital signal processors (DSPs) and/or other programmable devices with stored programs for performance of the signal processing of the preferred embodiment methods. Alternatively, specialized circuitry could be used. The transceivers may also contain analog integrated circuits for amplification of inputs to or outputs and conversion between analog and digital; and these analog and processor circuits may be integrated as a system on a chip (SoC). The stored programs may, for example, be in ROM or flash EEPROM integrated with the processor or external. Exemplary DSP cores could be in the TMS320C6xxx or TMS320C5xxx families from Texas Instruments.

ROM or flash EEPROM are clearly computer-readable medium. This objection clearly shows that Examiner does not have a clear reading of the instant application.

Claim Objections

Claims 13 has been objected to as being in improper dependent form. Correction has been made. This objection is moot given that claim 13 has been cancelled.

Claim 14 has been objected to due to informality. This objection is moot given the above amendment to claim 14.

Claim Rejections - 35 USC § 112

Claims 9-13 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claims 9-13 have been cancelled.

Claim Rejections - 35 USC § 102

Claims 8 -13 and were rejected under 35 U.S.C. § 102 as being anticipated by Chow (United States Patent Number 6,009,122).

Chow has been assigned to Texas Instruments Incorporated—assignee of the instant application.

In the Response to Arguments section, the Examiner writes that, “how to define frames or symbols to be arranged as type 1, type 2 or type 3 is optional and can be based on the interpretation of the claims.” Examiner points to Figure 4B of Chow but totally ignores the limitations of the claim for “two-band duplex” and “hybrid duplex” method.

Chow, specifically in figure 4A, symbols are either upstream, downstream or quiet. Upstream and downstream subchannels are never allocated within the same symbol. Figure 4B of Chow uses the 16-1-2-1 frame from figure 4A in one line of service and 9-1-9-1 frame from figure 4A in another line of service.

Contrast this with claim 8 of the instant application:

"...a first set of symbols are a plurality of type 1 symbols, for transmission in said first direction in a first set of subchannels and transmission in said second direction in a second set of subchannels where said first and said second directions differ..."

Embodiments of the instant invention are drawn to a hybrid duplexing method where upstream and downstream data transmission occurs at the same time in some of the symbols, which is never the case in Chow's patent. Chow uses different lines of service.

Claim Rejections - 35 USC § 103

Claims 14 and were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chow (United States Patent Number 6,009,122) in view of Kumar (United States Publication Number 20030086487).

As described above, Chow alone or in combination with Kumar fail to teach hybrid duplexing as claimed in claim 14.

Applicants submit that the claims are in condition for allowance and respectfully request a Notice of Allowance. Please charge any additional fees, or credit overpayment to Deposit Account No. 20-0668. Should the Examiner have further inquiry concerning these matters, please contact the below named attorney for Applicants.

Respectfully submitted:

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